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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,634

Applicant(s)

LANDRIEVE, FRANCK

Examiner

Melody M. Burch

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/16/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - The disclosure lacks the appropriate headings typical to US Patent format including but not limited to "Summary of the Invention", "Brief Description of Drawings";
 - The use of legal terms such as "said" found, for example, on line 7 of pg. 7;
 - The sensor was designated with both numbers "20" and "22". See line 22 of pg. 8 regarding the use of number "22";
 - Number "29" was used to designate both flexible tabs and the annular friction member. See pg. 9 lines 6-7.

Appropriate correction is required.

Claim Objections

2. Claims 1-23 are objected to because of the following informalities:
 - The phrase "the said rotating" in line 6 of claim 1 should be changed to either --the rotating--or --said rotating-- (a similar issue exists in claim 21);
 - The phrase "and inner part" in line 3 of claim 22 should be changed to --and the inner part-- to refer back to the previously claimed inner part--;
 - The phrase "inner part be able to" in line 5 of claim 23 should be changed to -inner part is able to-- for grammatical purposes. Appropriate correction is required.

The remaining claims are objected to due to their dependency from claim 1.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 1. The phrase “one being able to rotate with respect to the other” is indefinite. It is unclear to the Examiner as to which elements represent the “one” and the “other”. If Applicant intends to refer to the inner and outer parts, Examiner recommends such language as --one of the inner part and the outer part being able to rotate with respect to the other--. Examiner also recommends amending the first two lines of the claim to read --Braked rolling bearing device of the type for a control wheel, said bearing device comprising—to clearly identify which component comprises the elements set forth in the body of the claim.

Re: claims 6 and 10. The phrase “the member” in line 1 of claims 6 and 10 leads to confusion since the recitation of “the member” suggests a reference to the annular friction member, however the recitation of “equipped with tabs” suggests a reference to the component. Also, the phrase “the outer ring” in line 3 of claim 6 lacks proper antecedent basis.

Re: claim 7. The phrase “the member” in line 1 leads to confusion since the

recitation of "the member" suggests a reference to the annular friction member, however the recitation of "equipped with tabs" suggests a reference to the component. Also, the phrase "the inner ring" in line 3 lacks proper antecedent basis.

Re: claims 8 and 9. The phrase "the member" in line 1 leads to confusion since the recitation of "the member" suggests a reference to the annular friction member, however the recitation of "equipped with tabs" suggests a reference to the component. Also, the phrase "with tabs" in line 3 is indefinite. It is unclear to the Examiner whether or not Applicant intends to refer back to the tabs claimed in line 2. If Applicant intends to refer back to the tabs in line 2, Examiner recommends the use of such language as -- with said tabs--.

Re: claims 12-14. The phrase "a bearing ring" in line 3 is indefinite. It is unclear to the Examiner whether the bearing ring is intended to be the same or different from one of the inner and outer parts. Clarification is required.

Re: claim 18. The phrase "the inner ring" in lines 1-2 lacks proper antecedent basis.

Re: claim 20. The phrase "the outer ring" in lines 1-2 lacks proper antecedent basis.

Re: claim 21. The phrases "the cover" and "the casing" in lines 1 and 2 lack proper antecedent basis.

The remaining claims are indefinite due to their dependency from claim 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4, 5, 8, 11-14, and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR-2804479 (FR '479) in view of US Patent 5044784 to Lisowsky.

Re: claims 1, 2, 22, and 23. FR '479 shows in figures 19 and 20 a braked rolling bearing device of the type for a control wheel, comprising an outer part 2 and an inner part 4, one (the inner part) being able to rotate with respect to the other, which does not rotate, by means of at least one row of rolling elements 6 arranged between the rotating and non-rotating parts, the device further comprising a means for detecting rotating parameters 16, a means 62,62a for braking the rotating part, and an annular friction member 63 or 64, the braking means comprising at least one component 62 equipped with a flexible tab 62a bearing against the annular friction member as shown in figure 19.

FR '479 shows the use of one flexible tab, but does not show the limitation of the component being equipped with a plurality of flexible tabs.

Lisowsky teaches in figures 2-4 the use of a component 54 being equipped with a plurality of flexible tabs 56.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the flexible tab of FR '479 to have been a plurality of flexible tabs, as taught by Lisowsky, in order to provide sinusoidal or wavelike deflections of element 64 in response to movement of element 62 in an axial direction to effect different energy-absorbing characteristics depending on the particular application. Examiner also notes that the use of multiple tabs will result in a similar braking capacity due to the contact of the tabs against element 64 using less material.

Re: claims 4 and 5. FR'479, as modified, teaches in figure 2 of Lisowsky the limitation wherein the tabs are arranged in opposing pairs and are uniformly distributed about the circumference as shown in figure 2.

Re: claim 8. FR '479, as modified, teaches in figure 20 of FR '479 the limitation wherein in that the member equipped with the tabs comprises a push-fit portion or portion shown lodged into element 2 and leading up to area 62a and a portion 62a equipped with tabs, one of the portions being axial (particularly, the axial component of the portion lodged into element 2) and the other (62a) radial.

Re: claims 11-13. FR '479, as modified, teaches in figure 20 of FR '479 the limitation wherein the annular friction member comprises a support 63a and a friction lining 64, the support is mounted axially between a bearing ring 4 and a shoulder 33 of an element 31 secured to the ring.

Re: claim 14. FR '479, as modified, teaches in figure 20 of FR '479 the limitation wherein the annular friction member 64 comprises a friction lining supported directly by an element 63a secured to a bearing ring 4.

Re: claims 16 and 17. FR '479, as modified, teaches in figure 20 of FR '479 the limitation wherein the means for detecting rotation parameters comprises a sensor 14 secured to the non-rotating part and an encoder 18 secured to the rotating part or a sensor mounted in a cover 19 equipped with a wire outlet shown in the area of element 20.

Re: claims 18 and 19. FR '479, as modified, teaches in figure 20 of FR '479 the limitation wherein the inner ring 4 of the bearing is push-fitted onto a shaft 31 (having a shoulder 33 extending outward) supporting the wheel shown in figure 1 in the area of the lead line of number 34.

Re: claims 20 and 21. FR '479, as modified, teaches in figure 20 of FR '479 the limitation wherein the outer ring of the bearing is push-fitted into a casing 1 supporting part of the braking means and wherein the cover 15 is fixed onto the end of the casing 1 so as to close off the casing on the opposite side to the wheel.

7. Claims 1, 3-10, 13, 14, 18, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5044784 to Lisowsky in view of FR-2804479 (FR '479).

Re: claims 1, 3-5, 9, 10, 22, and 23. Lisowsky shows in figure 4 a braked rolling bearing device of the type for a control wheel, comprising an outer part 68 and an inner part shown to the right of the lead arrow of number 70, one (the inner part) being able to rotate with respect to the other, which does not rotate, by means of at least one row of rolling elements as shown arranged between the rotating and non-rotating parts, the device further comprising a means 50 for braking the rotating part, and an annular

friction member 52, the braking means comprising at least one component 54 equipped with flexible tabs 56 or 56,58 bearing against the annular friction member.

Lisowsky does not include the limitation of the device further comprising a means for detecting rotation parameters. FR'479 teaches in figures 19 and 20 a bearing device comprising a means 16 for detecting rotation parameters.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the bearing device of Lisowsky to have included a means for detecting rotation parameters, as taught by FR '479, in order to allow an operator to know actual rotation parameters which may be used to adjust braking and/or isolation to achieve desired rotation parameters depending on the particular application.

Re: claim 6. Lisowsky, as modified, teaches in figure 4 of Lisowsky the limitation wherein the member equipped with the tabs is push-fitted onto a support 66 of the outer ring 68.

Re: claim 7. Lisowsky, as modified, teaches in figure 4 of Lisowsky the limitation wherein in that the member 54 equipped with the tabs is push-fitted onto a shaft 72 secured to the inner ring via intervening elements.

Re: claim 8. Lisowsky, as modified, teaches in figure 4 of Lisowsky the limitation wherein in that the member 54 equipped with the tabs comprises a push-fit portion or portion shown in the area of the lead line of number 54 and a portion 56 equipped with tabs, one of the portions being axial (particularly, the push-fit portion) and the other (the portion equipped with the tabs) radial.

Re: claims 13 and 14. Lisowsky, as modified, teaches in figure 4 of Lisowsky the limitation wherein the annular friction member comprises a support 52 push-fitted onto an element 58 secured to a bearing ring 66 or comprises a friction lining 52 supported directly by an element 58 secured to a bearing ring 66.

Re: claim 18. Lisowsky, as modified, teaches in figure 4 of Lisowsky the limitation wherein the inner ring of the bearing is push-fitted onto a shaft 72 supporting the wheel supported at the end of the shaft.

Re: claim 20. Lisowsky, as modified, teaches in figure 4 of Lisowsky the limitation wherein the outer ring 68 of the bearing is push-fitted into a casing 66 supporting part of the braking means.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over FR-2804479 (FR '479) in view of US Patent 5044784 to Lisowsky as applied to claim 1 above, and further in view of FR-810088 (FR '088).

FR '479, as modified, describes the invention substantially as set forth above, but does not include the limitation of the device comprising a seal protecting the braking means. FR '088 teaches in figure 1 the use of a seal 13 protecting the braking means 33 from debris entering from the right side of the device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of FR'479, as modified, to include a seal, as taught by FR '088, in order to provide means for protecting the braking means from debris.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5044784 to Lisowsky in view of FR-2804479 (FR '479) as applied to claim 1 above, and further in view of FR-810088 (FR '088).

Lisowsky, as modified, describes the invention substantially as set forth above, but does not include the limitation of the device comprising a seal protecting the braking means. FR '088 teaches in figure 1 the use of a seal 13 protecting the braking means 33 from debris entering from the right side of the device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Lisowsky, as modified, to include a seal, as taught by FR '088, in order to provide means for protecting the braking means from debris.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 4229055, 4571098, 4960334, 5044785, 5531526, 3743059, and 5826987 teach similar bearing devices including braking means.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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October 6, 2004

Melody M. Burch
10/6/04